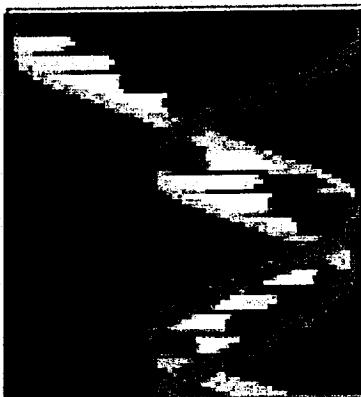




# Computational Bio-nanotechnology

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## RESEARCH:

In today's world, three seemingly diverse fields - computer information technology, nanotechnology and biotechnology are joining forces to enlarge our scientific knowledge and solve complex technological problems. Our group is dedicated to conduct theoretical research exploring the challenges in this area.

## GROUP MEMBERS:

Manoj Samanta

Shoudan Liang

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We collaborate with researchers from Stanford, Caltech, UConn Health Center, UCSF Medical School, Pennsylvania State University, University of Virginia School of Medicine, and University of Washington.

## MAJOR AREAS:

Yeast Protein Interactions

Protein Structures

Current Transport through Small Molecules

We are part of the nanotechnology team at NASA Ames Research Center.

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**Please email [msamanta@nas.nasa.gov](mailto:msamanta@nas.nasa.gov) with any comment or suggestion on this website.**



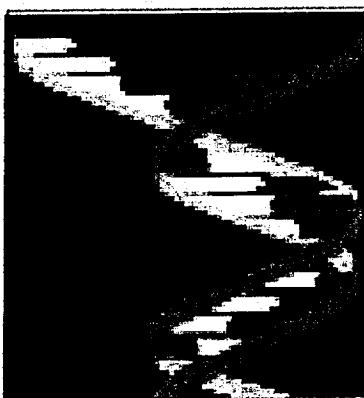
# Analysis of Protein Interaction Data from Yeast



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## RESEARCH:

Currently we are trying to understand the yeast proteome. There are several experimental studies exploring the technology, nanotechnology and biotechnology are joining together to solve scientific and technological problems. Our group is dedicated to theoretical research exploring this challenging new direction of science.

## MAJOR AREAS:

### Common Partners of Protein

In this work, we analyze the common partners of protein to find any statistical significance.

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---

[Research](#)

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### Global Analysis of Protein Interaction Network

In this work, we analyze the protein interaction network using a percolation based method for long range order.

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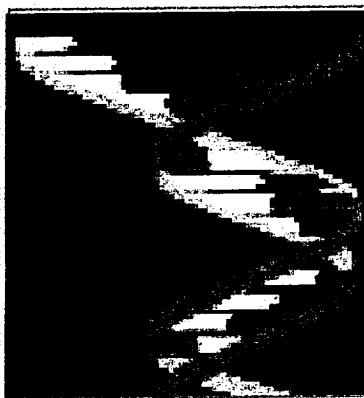
## Common Partners of Proteins



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### RESEARCH:

In this work, we start with two-protein interaction data of yeast available from the DIP database and conduct an analysis based on the number of common partners every pairs of proteins share. The interactions are ranked based on their probabilities of occurrence in a random sample and then significant pairs are studied for interesting patterns. More details about the method and observations are provided in this publication.

You can download the top 8000 pairs from our dataset from [here](#) -plain text, html.

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Or enter any protein-name or ORF in the form below to get a list of other proteins it prefers to share partners with.

To download our paper on this, click [here](#).

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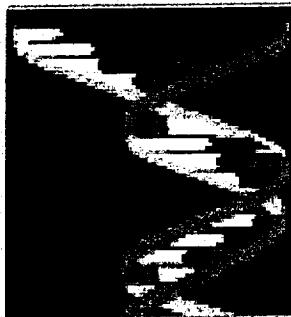
## Top 8000 Pairs



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1-250	251-500	501-750	751-1000
1001-1250	1251-1500	1501-1750	1751-2000
2001-2250	2251-2500	2501-2750	2751-3000
3001-3250	3251-3500	3501-3750	3751-4000
4001-4250	4251-4500	4501-4750	4751-5000
5001-5250	5251-5500	5501-5750	5751-6000
6001-6250	6251-6500	6501-6750	6751-7000
7001-7250	7251-7500	7501-7750	7751-8000

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### Protein Pairs and Probabilities of Partners

Protein 1	# Partners	Protein 2	# Partners	Common	Prob.
MYO3 [-] [C] 	19	MYO5 [-] [C] 	25	19	-47.406640
ROX3 [-] [B] 	25	SRB6 [+] [T] 	30	21	-46.116416
KRR1 [+] [U] 	34	PWP2 [+] [C] 	57	26	-45.496602
ROX3 [-] [B] 	25	MED2 [-] [T] 	26	20	-44.938714
MED2 [-] [T] 	26	SRB6 [+] [T] 	30	20	-42.189077
ATP1 [-] [E] 	18	ATP2 [-] [E] 	22	17	-42.174090
KAP95 [+] [O] 	57	SRP1 [+] [O] 	196	39	-41.254598
PRE1 [+] [F] 	35	RPN10 [-] [F] 	37	22	-40.575226
YNL110C [+] [U] 	30	YKR081C [+] [U] 	45	22	-40.332938
RPT1 [+] [F] 	30	RPN6 [+] [F] 	30	20	-40.077194
SMX2 [-] [T] 	33	SMX3 [+] [T] 	35	21	-39.470885
RPT1 [+] [F] 	30	RPN5 [+] [F] 	42	21	-38.501792
YKR081C [+] [U] 	45	NOP2 [+] [T] 	48	24	-38.256150
RPN6 [+] [F] 	30	RPT3 [+] [F] 	54	22	-38.061850
RPN10 [-] [F] 	37	RPN5 [+] [F] 	42	22	-38.043439
RPN6 [+] [F] 	30	RPN10 [-] [F] 	37	20	-37.359955
NUP49 [+] [O] 	25	NUP57 [+] [O] 	39	19	-36.579457
CKA2 [-] [T] 	22	CKB1 [-] [T] 	27	17	-36.507398
SRB6 [+] [T] 	30	MED7 [+] [B] 	32	19	-36.389975
YFR024C [-] [U] 	20	YSC84 [-] [U] 	23	16	-36.337854
RPN6 [+] [F] 	30	RPN5 [+] [F] 	42	20	-35.855384
RPT1 [+] [F] 	30	RPT2 [+] [F] 	54	21	-35.526602

RPT1 [+] [F]	30	RPT3 [+] [F]	54	21	-35.526602
RPT1 [+] [F]	30	RPN10 [-] [F]	37	19	-34.688605
KRR1 [+] [U]	34	YGR090W [+] [U]	51	21	-34.380951
YKR081C [+] [U]	45	YMR049C [+] [U]	55	23	-34.185577
PRE1 [+] [F]	35	RPN5 [+] [F]	42	20	-33.831824
SSF1 [-] [C]	26	NOP2 [+] [T]	48	19	-33.793427
UBP6 [-] [F]	14	RPN12 [+] [F]	26	14	-33.465299
NOP2 [+] [T]	48	YMR049C [+] [U]	55	23	-33.318364
RPN12 [+] [F]	26	RPN6 [+] [F]	30	17	-33.287209
YDR060W [+] [P]	28	NOP4 [+] [T]	38	18	-32.638473
MED2 [-] [T]	26	MED7 [+] [B]	32	17	-32.614595
RPN10 [-] [F]	37	RPT3 [+] [F]	54	21	-32.593992
YKL059C [+] [U]	16	CFT2 [+] [T]	16	13	-32.430607
YFR024C [-] [U]	20	SLA1 [-] [C]	34	16	-32.388193
CCT3 [+] [F]	16	CCT2 [+] [F]	24	14	-32.080316
YGR090W [+] [U]	51	PWP2 [+] [C]	57	23	-32.075325
SSF1 [-] [C]	26	YKR081C [+] [U]	45	18	-31.855822
YGL004C [-] [U]	18	RPT1 [+] [F]	30	15	-31.845977
CFT2 [+] [T]	16	YSH1 [+] [T]	17	13	-31.802497
TEM1 [+] [D]	115	SRP1 [+] [O]	196	44	-31.785039
SKI6 [+] [T]	16	RRP45 [+] [T]	18	13	-31.246473
CFT2 [+] [T]	16	PTA1 [+] [T]	18	13	-31.246473
RPN8 [+] [F]	26	RPN10 [-] [F]	37	17	-31.169855

RPN8 [+] [F]	26	RPN10 [-] [F]	37	17	-31.169855
SNU71 [+] [T]	18	LUC7 [+] [T]	23	14	-31.055475
RPN5 [+] [F]	42	RPT3 [+] [F]	54	21	-30.988230
YGL161C [-] [U]	19	YGL198W [-] [U]	22	14	-30.883548
CFT2 [+] [T]	16	PAP1 [+] [T]	19	13	-30.746150
REF2 [-] [T]	17	PTA1 [+] [T]	18	13	-30.618549
ROX3 [-] [B]	25	MED7 [+] [B]	32	16	-30.334202
CKB1 [-] [T]	27	CKA1 [-] [T]	65	19	-30.252221
CFT1 [+] [T]	14	YKL059C [+] [U]	16	12	-30.151475
CFT1 [+] [T]	14	CFT2 [+] [T]	16	12	-30.151475
YIF1 [+] [O]	17	YGL161C [-] [U]	19	13	-30.118319
BET1 [+] [O]	19	BOS1 [+] [O]	24	14	-30.096782
GAL11 [-] [T]	21	SRB6 [+] [T]	30	15	-30.027344
YGL004C [-] [U]	18	RPN12 [+] [F]	26	14	-29.984041
RPN11 [+] [F]	23	RPN10 [-] [F]	37	16	-29.924464
YGL004C [-] [U]	18	RPT3 [+] [F]	54	16	-29.908208
RPT2 [+] [F]	14	RPN3 [+] [F]	17	12	-29.620182
PTA1 [+] [T]	18	PAP1 [+] [T]	19	13	-29.562574
YNL110C [+] [U]	30	NOP2 [+] [T]	48	18	-29.496631
YKR081C [+] [U]	45	CDC95 [+] [P]	48	20	-29.364174
RPN11 [+] [F]	23	RPT3 [+] [F]	54	17	-29.192525
YHC1 [+] [T]	14	SNU71 [+] [T]	18	12	-29.143247
CFT1 [+] [T]	14	PTA1 [+] [T]	18	12	-29.143247
RPN9 [+] [F]	21	RPT6 [+] [F]	24	14	-29.098643

RPN9 [+] [F]		21	RPT6 [+] [F]		24	14	-29.098643
NOP4 [+] [T]		38	NOP2 [+] [T]		48	19	-29.095719
RPN11 [+] [F]		23	RPT1 [+] [F]		30	15	-29.074176
RPN11 [+] [F]		23	RPN6 [+] [F]		30	15	-29.074176
YHR052W [-] [U]		27	YGR103W [+] [U]		34	16	-28.970022
GIC1 [-] [C]		15	GIC2 [-] [C]		17	12	-28.921676
SKI6 [+] [T]		16	RRP46 [+] [T]		16	12	-28.851188
DIS3 [+] [T]		16	RRP46 [+] [T]		16	12	-28.851188
YGL004C [-] [U]		18	RPN6 [+] [F]		30	14	-28.807773
NOP2 [+] [T]		48	CDC95 [+] [P]		48	20	-28.649448
RPN12 [+] [F]		26	RPN10 [-] [F]		37	16	-28.594546
YKL059C [+] [U]		16	YSH1 [+] [T]		17	12	-28.320081
CFT2 [+] [T]		16	REF2 [-] [T]		17	12	-28.320081
PRP45 [+] [T]		22	CEF1 [+] [D]		25	14	-28.304439
MRP4 [-] [P]		35	MRPS5 [-] [P]		36	17	-28.290113
YDR036C [-] [U]		17	MRP4 [-] [P]		35	14	-28.258046
NUP100 [-] [O]		33	NUP57 [+] [O]		39	17	-28.107497
SPP381 [+] [T]		18	SMX2 [-] [T]		33	14	-28.058341
YDR036C [-] [U]		17	MRPS5 [-] [P]		36	14	-28.044447
YSC84 [-] [U]		23	SLA1 [-] [C]		34	15	-27.999251
RPT2 [+] [F]		14	RPN9 [+] [F]		21	12	-27.944232
NUP42 [-] [O]		31	NUP100 [-] [O]		33	16	-27.888851
RPN12 [+] [F]		26	RPT1 [+] [F]		30	15	-27.880880

RPN12 [+] [F]		RPT1 [+] [F]			
YKL059C [+] [U]	16	PTA1 [+] [T]	18	12	-27.843331
CFT2 [+] [T]	16	PFS2 [+] [T]	18	12	-27.843331
RRP46 [+] [T]	16	RRP45 [+] [T]	18	12	-27.843331
RPN12 [+] [F]	26	RPT3 [+] [F]	54	17	-27.712199
YGL004C [-] [U]	18	PRE1 [+] [F]	35	14	-27.606789
NOP4 [+] [T]	38	YKR081C [+] [U]	45	18	-27.553804
RPN12 [+] [F]	26	RPN5 [+] [F]	42	16	-27.487552
NUP49 [+] [O]	25	NUP100 [-] [O]	33	15	-27.430676
YKL059C [+] [U]	16	PAP1 [+] [T]	19	12	-27.410048
REF2 [-] [T]	17	FIP1 [+] [T]	18	12	-27.312410
YSH1 [+] [T]	17	PTA1 [+] [T]	18	12	-27.312410
CDC27 [+] [D]	11	APC1 [+] [D]	12	10	-27.288898
UBP6 [-] [F]	14	RPN10 [-] [F]	37	13	-27.230502
YSH1 [+] [T]	17	PAP1 [+] [T]	19	12	-26.879219
PTA1 [+] [T]	18	PFS2 [+] [T]	18	12	-26.835847
GAL11 [-] [T]	21	MED7 [+] [B]	32	14	-26.722973
PRP19 [+] [T]	16	CLF1 [+] [D]	21	12	-26.644875
MRPL10 [-] [P]	28	MRPL9 [-] [P]	32	15	-26.638762
RPN12 [+] [F]	26	PRE1 [+] [F]	35	15	-26.565064
YGR103W [+] [U]	34	YKR081C [+] [U]	45	17	-26.483213
RPN3 [+] [F]	17	RPN6 [+] [F]	30	13	-26.477585
NOG1 [+] [U]	27	YGR103W [+] [U]	34	15	-26.456665
RPT2 [+] [F]	14	RPN8 [+] [F]	26	12	-26.428532

RPT2 [+] [F] 	14	RPN8 [+] [F] 	26	12	-26.428532
FIP1 [+] [T] 	18	PAP1 [+] [T] 	19	12	-26.402749
UBP6 [-] [F] 	14	RPN5 [+] [F] 	42	13	-26.375861
RPN11 [+] [F] 	23	RPN5 [+] [F] 	42	15	-26.279602
YGL004C [-] [U] 	18	RPN5 [+] [F] 	42	14	-26.251755
RPT6 [+] [F] 	24	RPT3 [+] [F] 	54	16	-26.247617
TCP1 [+] [F] 	21	CCT2 [+] [F] 	24	13	-26.228519
NAM8 [-] [T] 	22	LUC7 [+] [T] 	23	13	-26.179343
CFT1 [+] [T] 	14	REF2 [-] [T] 	17	11	-26.126677
CFT1 [+] [T] 	14	YSH1 [+] [T] 	17	11	-26.126677
RPN3 [+] [F] 	17	RPN9 [+] [F] 	21	12	-26.114233
GAL11 [-] [T] 	21	ROX3 [-] [B] 	25	13	-25.910505
CLF1 [+] [D] 	21	CEF1 [+] [D] 	25	13	-25.910505
SSF1 [-] [C] 	26	NOP4 [+] [T] 	38	15	-25.890228
CKA2 [-] [T] 	22	CKA1 [-] [T] 	65	16	-25.753033
RPC34 [+] [T] 	15	RPO31 [+] [T] 	26	12	-25.730864
UBP6 [-] [F] 	14	YGL004C [-] [U] 	18	11	-25.716782
YTH1 [+] [T] 	14	PTA1 [+] [T] 	18	11	-25.716782
CFT1 [+] [T] 	14	PFS2 [+] [T] 	18	11	-25.716782
NGG1 [-] [B] 	25	ADA2 [-] [B] 	30	14	-25.654844
GAL11 [-] [T] 	21	MED2 [-] [T] 	26	13	-25.610220
LSM7 [-] [T] 	22	LSM5 [+] [T] 	35	14	-25.595498
BET1 [+] [O] 	19	SEC22 [-] [O] 	20	12	-25.572455
----- 	10	----- 	10	9	-25.479218

GEOTRACK		GEOTRACK			
APC11 [+] [D]	10	APC5 [+] [D]	10	9	-25.479218
UBP6 [-] [F]	14	RPT1 [+] [F]	30	12	-25.477169
UBP6 [-] [F]	14	RPN6 [+] [F]	30	12	-25.477169
RPN8 [+] [F]	26	RPT3 [+] [F]	54	16	-25.396046
YTH1 [+] [T]	14	PAP1 [+] [T]	19	11	-25.341397
CFT1 [+] [T]	14	PAP1 [+] [T]	19	11	-25.341397
CDC53 [+] [F]	29	SKP1 [+] [F]	36	15	-25.336219
SSF1 [-] [C]	26	YNL110C [+] [U]	30	14	-25.320543
SNU71 [+] [T]	18	NAM8 [-] [T]	22	12	-25.296084
RPT1 [+] [F]	30	PRE1 [+] [F]	35	15	-25.269831
TIF4632 [-] [P]	18	TIF4631 [-] [P]	33	13	-25.244293
NOP4 [+] [T]	38	YDL213C [-] [U]	58	18	-25.159490
RPN3 [+] [F]	17	RPT3 [+] [F]	54	14	-25.117590
YKL059C [+] [U]	16	REF2 [-] [T]	17	11	-25.048611
YNL110C [+] [U]	30	CDC95 [+] [P]	48	16	-24.936050
APC11 [+] [D]	10	CDC23 [+] [D]	20	10	-24.883050
APC5 [+] [D]	10	CDC23 [+] [D]	20	10	-24.883050
YER082C [+] [U]	40	PWP2 [+] [C]	57	18	-24.797807
DOC1 [-] [D]	10	CDC27 [+] [D]	11	9	-24.738948
APC11 [+] [D]	10	CDC27 [+] [D]	11	9	-24.738948
APC5 [+] [D]	10	CDC27 [+] [D]	11	9	-24.738948
ENP1 [+] [F]	33	PWP2 [+] [C]	57	17	-24.697193
ENP1 [+] [F]	33	KRR1 [+] [U]	34	15	-24.691606

ENP1 [+] [F] 	33	KRR1 [+] [U] 	34	15	-24.691606
CCT6 [+] [F] 	18	CCT2 [+] [F] 	24	12	-24.675835
YER126C [+] [U] 	20	YKR081C [+] [U] 	45	14	-24.656742
YKL059C [+] [U] 	16	PFS2 [+] [T] 	18	11	-24.638901
CFT2 [+] [T] 	16	FIP1 [+] [T] 	18	11	-24.638901
DIS3 [+] [T] 	16	RRP45 [+] [T] 	18	11	-24.638901
PRP19 [+] [T] 	16	SYF1 [+] [T] 	18	11	-24.638901
RPN3 [+] [F] 	17	RPN8 [+] [F] 	26	12	-24.599929
REF2 [-] [T] 	17	YSH1 [+] [T] 	17	11	-24.596871
RPT6 [+] [F] 	24	RPN8 [+] [F] 	26	13	-24.525125
UBP6 [-] [F] 	14	PRE1 [+] [F] 	35	12	-24.493682
YGL004C [-] [U] 	18	RPN10 [-] [F] 	37	13	-24.452689
RPO26 [+] [T] 	12	RPB5 [+] [T] 	16	10	-24.427695
CSL4 [+] [M] 	12	SKI6 [+] [T] 	16	10	-24.427695
CSL4 [+] [M] 	12	RRP46 [+] [T] 	16	10	-24.427695
RPT6 [+] [F] 	24	RPN10 [-] [F] 	37	14	-24.393230
LUC7 [+] [T] 	23	STO1 [-] [T] 	39	14	-24.380281
YHC1 [+] [T] 	14	NAM8 [-] [T] 	22	11	-24.372197
SDA1 [+] [D] 	18	YLR074C [-] [U] 	55	14	-24.340905
REF2 [-] [T] 	17	PFS2 [+] [T] 	18	11	-24.187254
YSH1 [+] [T] 	17	PFS2 [+] [T] 	18	11	-24.187254
APC4 [+] [D] 	9	CDC16 [+] [D] 	14	9	-24.177661
YTH1 [+] [T] 	14	CFT1 [+] [T] 	14	10	-24.150266
DOC1 [-] [D] 	10	APC1 [+] [D] 	12	9	-24.136980

DOC1 [-] [D]	10	APC1 [+] [D]	12	9	-24.136980
APC11 [+] [D]	10	APC1 [+] [D]	12	9	-24.136980
APC5 [+] [D]	10	APC1 [+] [D]	12	9	-24.136980
SNU71 [+] [T]	18	STO1 [-] [T]	39	13	-24.095688
UBP6 [-] [F]	14	RPN11 [+] [F]	23	11	-24.089930
YHC1 [+] [T]	14	LUC7 [+] [T]	23	11	-24.089930
YGR156W [+] [U]	12	YSH1 [+] [T]	17	10	-24.042530
CDC26 [-] [D]	11	CDC27 [+] [D]	11	9	-23.998770
RPN12 [+] [F]	26	RPN8 [+] [F]	26	13	-23.907759
SEC22 [-] [O]	20	BOS1 [+] [O]	24	12	-23.846473
CDC27 [+] [D]	11	CDC23 [+] [D]	20	10	-23.842586
RPT2 [+] [F]	14	RPT6 [+] [F]	24	11	-23.823941
REF2 [-] [T]	17	PAP1 [+] [T]	19	11	-23.812149
PTA1 [+] [T]	18	FIP1 [+] [T]	18	11	-23.777731
YGR103W [+] [U]	34	NOP2 [+] [T]	48	16	-23.767447
CSL4 [+] [M]	12	RRP45 [+] [T]	18	10	-23.690533
YGR156W [+] [U]	12	PTA1 [+] [T]	18	10	-23.690533
APC11 [+] [D]	10	APC2 [+] [D]	13	9	-23.625190
APC5 [+] [D]	10	APC2 [+] [D]	13	9	-23.625190
NAM8 [-] [T]	22	SMX2 [-] [T]	33	13	-23.487901
PRP4 [+] [T]	21	SNU114 [+] [P]	24	12	-23.479613
RPT6 [+] [F]	24	RPT1 [+] [F]	30	13	-23.467974
PFS2 [+] [T]	18	PAP1 [+] [T]	19	11	-23.402718

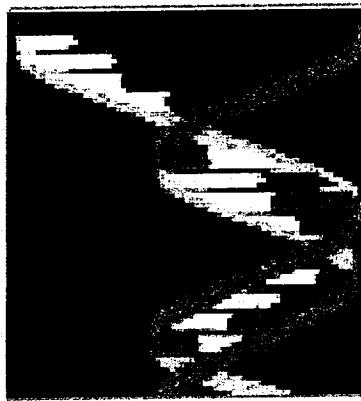
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STV1 [-] [A]	11	VPH1 [-] [O]	12	9		-23.396896
NUP57 [+] [O]	39	NUP116 [+] [O]	146	22		-23.347573
YTH1 [+] [T]	14	YKL059C [+] [U]	16	10		-23.247919
YTH1 [+] [T]	14	CFT2 [+] [T]	16	10		-23.247919
APC11 [+] [D]	10	CDC16 [+] [D]	14	9		-23.178125
BET3 [+] [O]	10	TRS20 [+] [O]	14	9		-23.178125
APC5 [+] [D]	10	CDC16 [+] [D]	14	9		-23.178125
SDA1 [+] [D]	18	YNL110C [+] [U]	30	12		-23.174238
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APC1 [+] [D]	12	CDC23 [+] [D]	20	10		-23.065364
SDA1 [+] [D]	18	YER126C [+] [U]	20	11		-23.056581
SSF1 [-] [C]	26	YMR049C [+] [U]	55	15		-23.021719
RPN6 [+] [F]	30	PRE1 [+] [F]	35	14		-22.953374
RPN9 [+] [F]	21	RPN8 [+] [F]	26	12		-22.928448
CDC27 [+] [D]	11	APC2 [+] [D]	13	9		-22.885198
YTM1 [+] [D]	22	HAS1 [+] [D]	25	12		-22.855242
RPN8 [+] [F]	26	RPN6 [+] [F]	30	13		-22.851354
YIF1 [+] [O]	17	YGL198W [-] [U]	22	11		-22.843786
YHR052W [-] [U]	27	YMR049C [+] [U]	55	15		-22.673276
YJL069C [+] [U]	29	YGR090W [+] [U]	51	15		-22.597947
CFT1 [+] [T]	14	FIP1 [+] [T]	18	10		-22.511129
PRP19 [+] [T]	16	CEF1 [+] [D]	25	11		-22.495830

PRP19 [+] [T]	16	CEF1 [+] [D]	25	11	-22.495830
RPT2 [+] [F]	14	RPN6 [+] [F]	30	11	-22.485477
CDC27 [+] [D]	11	CDC16 [+] [D]	14	9	-22.438226
APC2 [+] [D]	13	CDC23 [+] [D]	20	10	-22.429471
RPB8 [+] [T]	10	RPB5 [+] [T]	16	9	-22.421348
LSM3 [+] [T]	29	LSM8 [+] [T]	69	16	-22.361028
PRT1 [+] [P]	19	RPG1 [+] [P]	21	11	-22.360280
SKI6 [+] [T]	16	DIS3 [+] [T]	16	10	-22.345944
YNL110C [+] [U]	30	NOP4 [+] [T]	38	14	-22.337933
YTM1 [+] [D]	22	YHR052W [-] [U]	27	12	-22.332988
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RPN3 [+] [F]	17	RPT6 [+] [F]	24	11	-22.296088
APC1 [+] [D]	12	APC2 [+] [D]	13	9	-22.283510
RPN11 [+] [F]	23	RPN12 [+] [F]	26	12	-22.268297
RPN11 [+] [F]	23	RPN8 [+] [F]	26	12	-22.268297
APC4 [+] [D]	9	CDC23 [+] [D]	20	9	-22.253919
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CFT1 [+] [T]	14	HCA4 [+] [T]	19	10	-22.186990
RLP7 [+] [U]	11	NOG1 [+] [U]	27	10	-22.183685
APC4 [+] [D]	9	APC11 [+] [D]	10	8	-22.155481
APC4 [+] [D]	9	APC5 [+] [D]	10	8	-22.155481
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RPN9 [+] [F]	21	RPN6 [+] [F]	30	12	-21.979694
	31		39	14	-21.887726

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NUP42 [-] [O] 	31	NUP57 [+] [O] 	39	14	-21.887726
YGL004C [-] [U] 	18	RPT6 [+] [F] 	24	11	-21.887123
CDC16 [+] [D] 	14	CDC23 [+] [D] 	20	10	-21.886332

# Proteins Sharing Partners with MYO3

(Click on the p-value to get names of common partners )



Home

Research

Publications

Check other protein:

Sharing Partners with MYO3	log(p-value)
MYO5 [-][C] 	-47.406640
ARC35 [+][O] 	-9.816276
LAS17 [+][C] 	-9.341416
HOF1 [-][D] 	-7.923455
ARP3 [+][O] 	-7.402418
VRP1 [-][C] 	-7.032819
UBP7 [-][F] 	-6.252290
ARP2 [+][O] 	-6.080175
ARC15 [+][O] 	-5.952746
ARC18 [-][O] 	-5.333953
ARC19 [+][O] 	-5.333953
RVS167 [-][C] 	-5.123481
SLA1 [-][C] 	-5.091873
BCK1 [-][C] 	-5.043722
ACT1 [+][C] 	-4.850032
YHR133C [-][U] 	-4.808597
ZRT3 [-][O] 	-4.808597
ARC40 [+][C] 	-4.520456
BNI1 [-][C] 	-4.437624
SLF1 [-][P] 	-4.333053
BBC1 [-][U] 	-4.217695

BBC1 [-][U]	-4.217695
ABP1 [-][C]	-4.030852
RSP5 [+][F]	-3.818910
IMH1 [-][O]	-3.813330
YNL094W [-][U]	-3.771184
PFY1 [+][C]	-3.638816
YJL151C [-][U]	-3.494267
YPL246C [-][U]	-3.370907
PHO84 [-][A]	-3.168011
KAP122 [-][O]	-3.168011
YPR171W [-][U]	-3.082440
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YDR319C [-][U]	-1.918823
SEC8 [+][O]	-1.918823
RIM2 [+][E]	-1.918823
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PRE6 [+][F]	-1.407644
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SRB7 [+][T]	-1.407644
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YNK1 [-][M]	-1.407644
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LSB3 [-][U]	-1.407644
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SWM1 [-][C]	-1.367924
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PKC1 [+][C]	-1.239921
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SST2 [-][C]	-1.188913

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RVB1 [+][T]	SGD	-1.188913
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RPB3 [+][T]	-1.123359
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NIP29 [+][O]	-1.067692
CDC55 [-][C]	-1.067692
RPN11 [+][F]	-1.067692
STE4 [-][C]	-1.050886
BOS1 [+][O]	-1.050886
UBP15 [-][F]	-1.050886
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ROX3 [-][B]	-1.034835
RHO1 [+][C]	-1.019480
RPN1 [-][F]	-1.019480
RPN12 [+][F]	-1.019480
RPN8 [+][F]	-1.019480
	-1.004768

SRB2 [-][T]	SCP	-1.004768
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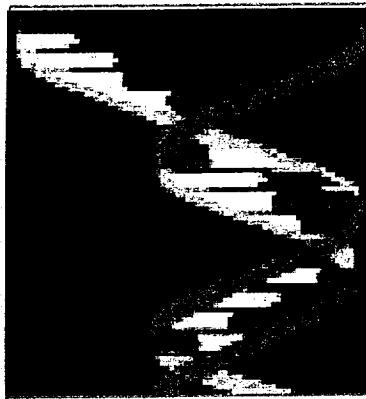
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# Proteins Sharing Partners with MYO3

(Click on the p-value to get names of common partners )



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Sharing Partners with MYO3	log(p-value)
MYO5 [-][C] 	-47.406640
ARC35 [+][O] 	-9.816276
LAS17 [+][C] 	-9.341416
HOF1 [-][D] 	-7.923455
ARP3 [+][O] 	-7.402418
VRP1 [-][C] 	-7.032819
UBP7 [-][F] 	-6.252290
ARP2 [+][O] 	-6.080175
ARC15 [+][O] 	-5.952746
ARC18 [-][O] 	-5.333953
ARC19 [+][O] 	-5.333953
RVS167 [-][C] 	-5.123481
SLA1 [-][C] 	-5.091873
BCK1 [-][C] 	-5.043722
ACT1 [+][C] 	-4.850032
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ZRT3 [-][O] 	-4.808597
ARC40 [+][C] 	-4.520456
BNI1 [-][C] 	-4.437624
SLF1 [-][P] 	-4.333053
BBC1 [-][U] 	-4.217695

BBC1 [-][U]	-4.217695
ABP1 [-][C]	-4.030852
RSP5 [+][F]	-3.818910
IMH1 [-][O]	-3.813330
YNL094W [-][U]	-3.771184
PFY1 [+][C]	-3.638816
YJL151C [-][U]	-3.494267
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KAP122 [-][O]	-3.168011
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SRP101 [+][F]	SGD	-1.918823

SRP101 [+][F]	SCP	-1.918823
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	scn	-1.622805

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RVB2 [+][D]		-1.123359
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GAL11 [-][T]		-1.103846
SIN4 [-][B]		-1.103846
UBI4 [-][F]		-1.085320
NIP29 [+][O]		-1.067692
CDC55 [-][C]		-1.067692
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STE4 [-][C]		-1.050886
BOS1 [+][O]		-1.050886
UBP15 [-][F]		-1.050886
RAD16 [-][D]		-1.034835
ROX3 [-][B]		-1.034835
RHO1 [+][C]		-1.019480
RPN1 [-][F]		-1.019480
RPN12 [+][F]		-1.019480
RPN8 [+][F]		-1.019480
		-1.004768

SRB2 [-][T]	SCR	-1.004768
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## Protein Domain Assignment by *Normalized Cut*



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Welcome to the NORMAL Domain Server for protein domain decomposition using our normalized cut routine. We also compare our results with other methods.

To try, enter the PDB code. (either 3-letter code e.g. 3CD4 or 4-letter code including chain e.g. 1ATNA).

PDB code:

Additional information on our method is provided in the following paper.

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Manoj Samanta and Shoudan Liang. Normalized Cut Algorithm for Automated Assignment of Protein Domains. *Unpublished*. Download here [postscript](#), [pdf](#), [HTML](#).

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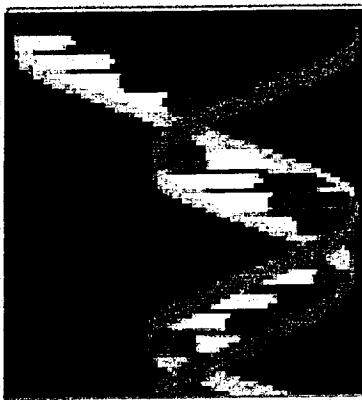
## Percolation-based Analysis of Protein Interaction in Yeast



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### RESEARCH:

In this work we start with yeast two protein interaction data from the DIP database and analyze it using a percolation based technique. of common partners every pairs of proteins have. The interactions are ranked based on their probability of occurrence in a random sample and then significant pairs are studied for interesting patterns.

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